



The ENERGY STAR Program

*Helping Energy Efficiency Programs
Meet C&I Energy Saving Goals*

Consortium for Energy Efficiency

January 15, 2008

Overview



- Overview of ENERGY STAR program for commercial and industrial sectors
- Integration into energy efficiency programs
 - Case studies
- Getting the most of the ENERGY STAR Partnership
 - Overview of key resources
 - Recognition opportunities
 - Additional resource for industry
- Q&A

Overview of ENERGY STAR C&I Program



- Rationale
 - Large potential cost-effective energy savings in commercial buildings
 - Whole building approaches address key program issues and deliver verifiable net savings
- Key ENERGY STAR Resources
 - Standardized measurement system for building energy efficiency
 - Energy management approaches for executives and energy managers
 - Technical assistance guidance and training
 - Education and outreach campaign and materials
 - Large partner network
 - Recognition for energy efficiency excellence and leadership

C&I ENERGY STAR Partners



- Commercial / Public / Industrial Partners 1,765
- Total Partner Building Area 11.5 billion sq ft
- Market Penetration of Benchmarking 15%
- Service and Product Provider Partners 1,285
- Energy Efficiency Program Sponsors 85
- Small Business / Congregation Network Participants 3,200

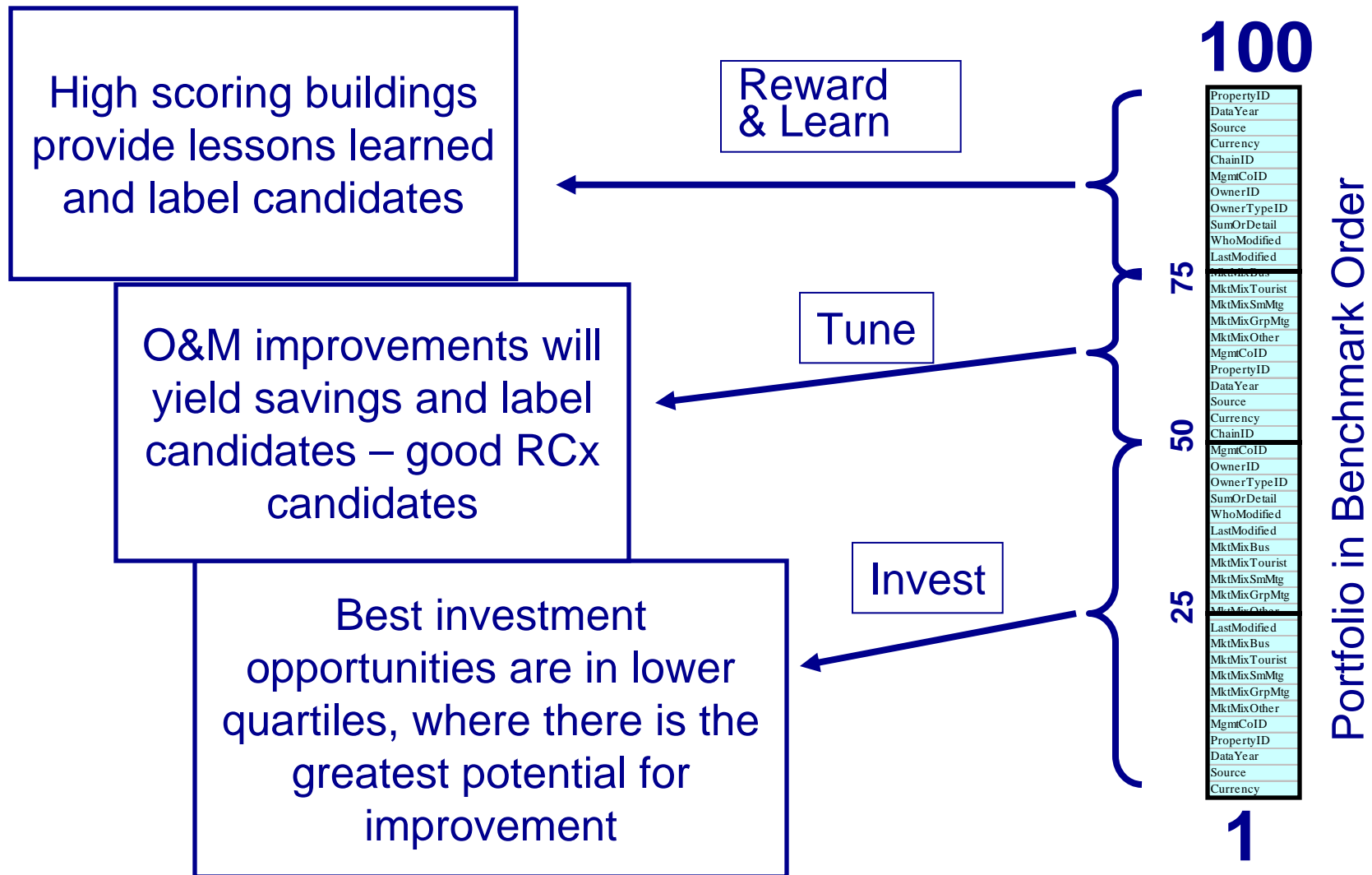
Totals as of September 30, 2007

How Utilities Can Benefit from Using ENERGY STAR in the C&I Market



- Leverage success of ENERGY STAR as a business strategy for building owners and managers
- Use ENERGY STAR credibility to sell energy efficiency
- Engage and motivate customers
- Use to enhance long-term relationship with customers
- Promote broader program participation to meet aggressive goals
- Reduce cost and time to develop and deliver programs
- Monitor energy efficiency improvements of customers
- Leverage customers already ENERGY STAR partners

The Foundation - Benchmarking Becomes a Business Practice



Performance Approach



- Benchmarking provides a platform for greater savings
 - Can build/promote more comprehensive programs
 - Whole building approaches deliver savings that prescriptive approaches fail to capture
- Benchmarking provides a straightforward / consistent method for documenting the results of efficiency projects
 - Tools track building energy performance over time
- Customers and efficiency programs can monitor savings and improvements
 - Savings are documented and verifiable at the whole building level

Improving Program Cost Effectiveness



- Incorporating ENERGY STAR initiatives, tools and resources can be a very cost effective addition to program portfolios
- Retro-commissioning programs that leverage ENERGY STAR and include benchmarking, typically have payback periods <1 year
- Benchmarking helps capture and document additional O&M savings that otherwise may go unreported
- Performance rating process offers a cost effective complement to traditional audit programs



ENERGY STAR as Integrated Element of C&I Program Design

Path to Whole Building Energy Performance



- Early
 - Complement / enhance proven prescriptive incentive strategies with sector-based education on benchmarking and whole building improvement approach.
- Midterm
 - Integrate benchmarking and comprehensive program designs (e.g., RCx).
 - Use custom rebates to encourage multiple-measures.
- Longer term
 - Benchmarking widely available to C&I customers.
 - Implementation of whole-building performance programs.
 - Provide additional incentives to reward comprehensive whole-building upgrades.

Incentive Design and ENERGY STAR

Variety of Ways



- For Professional Engineering services to obtain ENERGY STAR label
- Custom incentives for comprehensive improvement projects
- Bonus incentives for multi-measure projects
- Incentives for improving energy performance rating
- New construction incentives staged to recognized design intent, but link final payments to achieved performance

Examples of Integrating ENERGY STAR Resources into Efficiency Programs



- Foundation for Program Delivery
 - PG&E: “More Than a Million” Initiative
 - Xcel Energy: Commercial Real Estate Efficiency
 - NSTAR and National Grid: Benchmarking Programs
- Benchmarking: Integrated Program Design Element
 - CA IOUs (PG&E, SCE, and SDG&E): Retrocommissioning Programs
 - Wisconsin Focus on Energy: Commercial Programs
 - Commonwealth Edison: *NEW – proposed in DSM plan filed 11/15/07!!!*
- Enhanced Customer Information
 - Xcel Energy: Energy Analysis Program
 - NYSERDA: Energy Smart Schools Program

Case study – Xcel Energy CREE Program



- Program Design
 - Diagnosis:
 - 1) Benchmarking and Opportunity Summary
 - 2) Investment Grade Audit
 - Implementation:
 - Retrocommissioning and capital improvements
- 30% bonus rebate for implementation of all measures w/ payback \leq 3 yrs

A screenshot of the Xcel Energy website. The top navigation bar includes links for Privacy & Security, FAQs, Site Map, and Contact Us. Below this is the Xcel Energy logo. The main navigation menu has tabs for Home, Residential, Business (selected), Commercial & Industrial, and Energy Partners. A secondary menu bar lists Manage My Account, Renewable Energy Options, Save Energy & Money, Payment Options, and Programs & Resources. The left sidebar shows a search bar with "55101 Saint Paul, MN" and a list of categories under "Conservation Rebates & Incentives", including Conservation Programs Summary, Boiler Efficiency, Toolkit Registration - Trade Only, Commercial Real Estate (selected), Compressed Air, Cooling, Custom Efficiency, Efficiency Controls, Efficiency Proposal, Energy Analysis, Energy Design, Assistance, Heating, Lighting, Motors/VFDs, Process Efficiency, Recommissioning, Refrigeration, Refrigeration Efficiency, Roofing Efficiency, and Vending Efficiency. The main content area is titled "Commercial Real Estate Efficiency" and describes the program as providing extra rebate dollars and financial analysis tools for building owners and managers. It mentions that the program, by ConservationWise from Xcel Energy, helps increase energy efficiency and net operating income (NOI) with special technical and financial assistance. A "LIMITED-TIME PROGRAM" box states that the program is available from Jan 1, 2007 through Dec 11, 2009, and offers increased study funding, larger rebates, and enhanced energy expertise and financial analysis. A "SAVE UP TO 15% OR MORE ON ENERGY" section mentions that participants could see energy savings of up to 15 percent or more by making all the efficiency-related capital and operational improvements recommended by the program. A "Save now" section lists links for Program details, Participation process and timeline, Study rebate preapproval application, Study rebate application, and Fast-track improvement rebate application (for customers with a previously completed study).

Pilot Results: 43 buildings benchmarked; 18.5 M sq ft; 19 M kWh of savings identified; 500 measures identified

Case Study – PG&E “More than a Million” Initiative



- Promotional effort designed to reach building owners and property management firms with fleets of buildings capable of implementing 1 MW of demand savings
- Streamlined services for large customers willing to “bundle” projects” across buildings and follow through on a stream of projects
- Benchmarking with Portfolio Manager is the first step:
 - Facilitates prioritization of target buildings
 - Provides ongoing management “snapshot ”

2007 Results: 950 buildings benchmarked; 100 M sq ft; projected savings of 85 M kWh and 1 M therms; projected peak demand reduction of 2.7 MW.

Case Study – Wisconsin Focus on Energy



- Program promotes benchmarking as key first step to help customers manage their energy use and identify “high opportunity” buildings for energy efficiency upgrades.
- Program employs sector-based outreach/education, and is now targeting commercial real estate in addition to the retail, hospitality, and healthcare sectors.
- RCx Pilot launching in 2008:
 - Comprehensive Bonus boosts incentive from 50% to 80% of RCx costs
To qualify, customers must establish a baseline and adopt an energy management plan.
 - Obtaining a PM rating, maintaining that rating, and taking action to address a rating decrease is one way to earn the Comprehensive Bonus.

2007 Results: 50 buildings benchmarked; 5 M sq ft; 60 M kWh of electricity savings; 1.6 M therms of gas savings; 14 MW of peak demand reduction



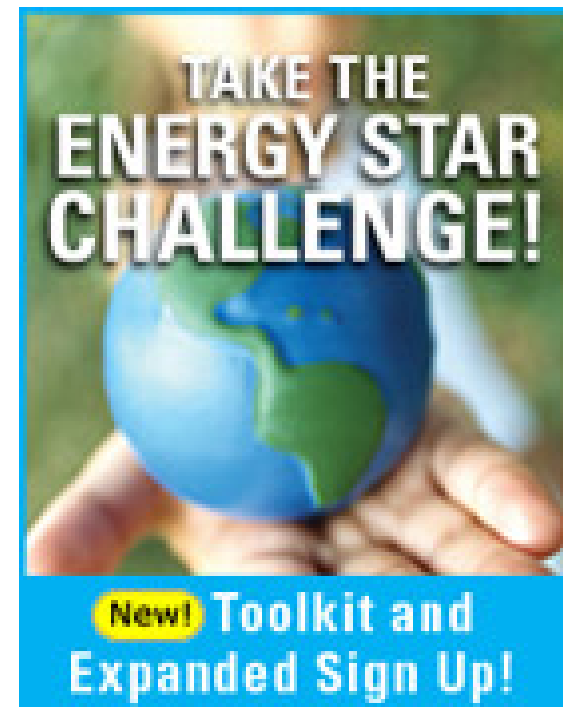
Getting the Most Out of the ENERGY STAR Partnership: Overview of Key Resources

ENERGY STAR Buildings

Key Resources for Utility Partners



- Marketing
 - ENERGY STAR Challenge
 - Sector-focused value propositions
- Training
- Program Implementation
 - Design assistance
 - Tools
 - Industry Partners
- Recognition
 - Labels
 - Leaders





Marketing – Promoting Your Energy Efficiency Program Offerings

Marketing ENERGY STAR Challenge



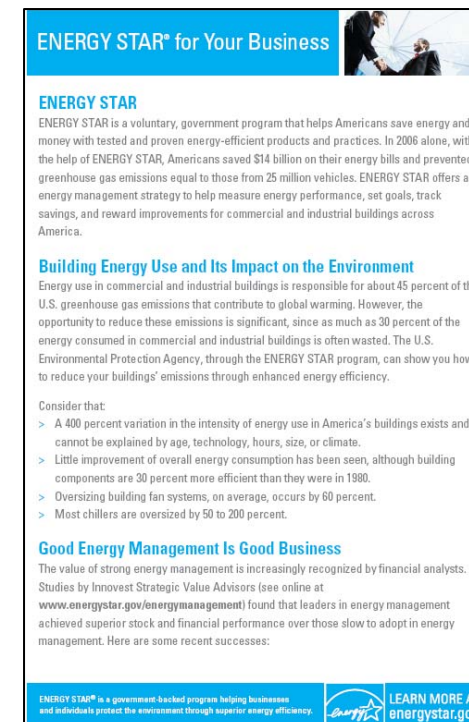
Co-brand ENERGY STAR communication materials to find creative ways to engage customers and communicate the benefits of your energy efficiency programs



Web banners



Co- brandable marketing materials



Informational materials

Marketing ENERGY STAR Challenge Toolkit



- Get Started
 - Quick Lists of ENERGY STAR Resources for Buildings and Homes
 - Model for establishing an energy efficiency campaign for communities
 - Learn More
 - Fact sheets on energy use in different parts of the community (offices, hotels, schools, supermarkets, congregations, etc.)
 - Fast facts on energy use and climate change to help you communities craft their message
 - Spread the Word
 - Co-brandable information cards, posters, and other materials for distribution to constituents and employees.
 - Sample news releases
 - Tips on working with the media to promote efforts
- . . . and much more

Marketing Sector Specific Opportunities



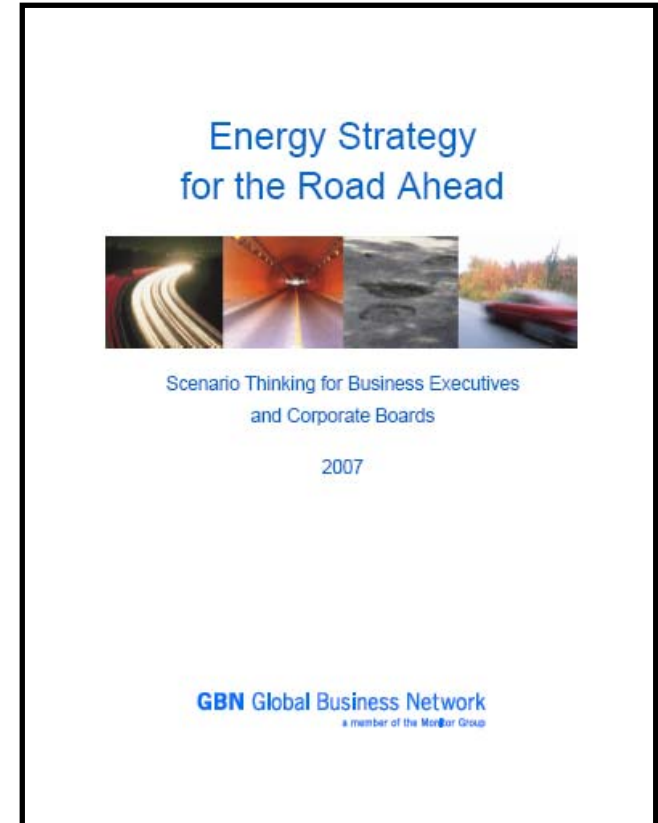
- Leverage ENERGY STAR partnership to engage industry decision makers along with facility managers in continuous energy improvement
- Develop/use sector specific financial value messaging to help promote program benefits
 - **Commercial Office Buildings** - Each \$1 invested in energy performance improvements at a 20-30% savings rate is equivalent to increasing net asset value by \$2.50-\$3.75
 - **Hospitality** - A 10% reduction in energy costs for the average full service hotel is equivalent to increasing Average Daily Rate (ADR) by 2.6% and increasing Occupancy Rates by 4.3%
 - **Supermarkets** - A 10% reduction in energy costs for the average supermarket is equivalent to increasing net profit margins by 15%, increasing Earnings Per Share by \$0.06, increasing sales per square foot by \$71

Marketing

Manage Energy to Manage Risk



- **Barrier:** Most organizations lack a long-term framework for energy management.
- **ENERGY STAR approach:** Identify best practices for energy strategy by engaging leading ENERGY STAR partner companies
- **Strategy project examined:**
 - How might the energy future look in 20 years?
 - How climate protection will affect the energy future?
 - How will it influence energy management?
- **Utilities can use report to:**
 - Engage senior managers in a strategic approach to participation in energy efficiency programs
 - Help customers understand the fundamentals of corporate energy management
 - Provide customers information for risk management in an uncertain energy future



http://www.energystar.gov/ia/business/GBN_Energy_Strategy.pdf



Training and Technical Assistance

Training

Energy Efficiency Program Partners



- Tap into on-going help from experts
- Customized and off-the-shelf trainings available to Partners on ENERGY STAR tools and resources
 - Leverage existing on-line tools to train program staff and account managers
- On-line trainings: Live, Pre-recorded and Self Guided
 - Energy Management and Project Evaluation
 - Benchmarking
 - New building design guidance
- Case studies

Training

For Trade Allies and Customers



- Train trade allies to more effectively deliver benchmarking and related services to your customers
- Leverage ENERGY STAR training to educate customers on best practices for energy management
- Integrate training into program design
 - Host training sessions on-site for customers and trade allies
 - Co-brand training resources

Technical Assistance Guidance Document and Other Resources



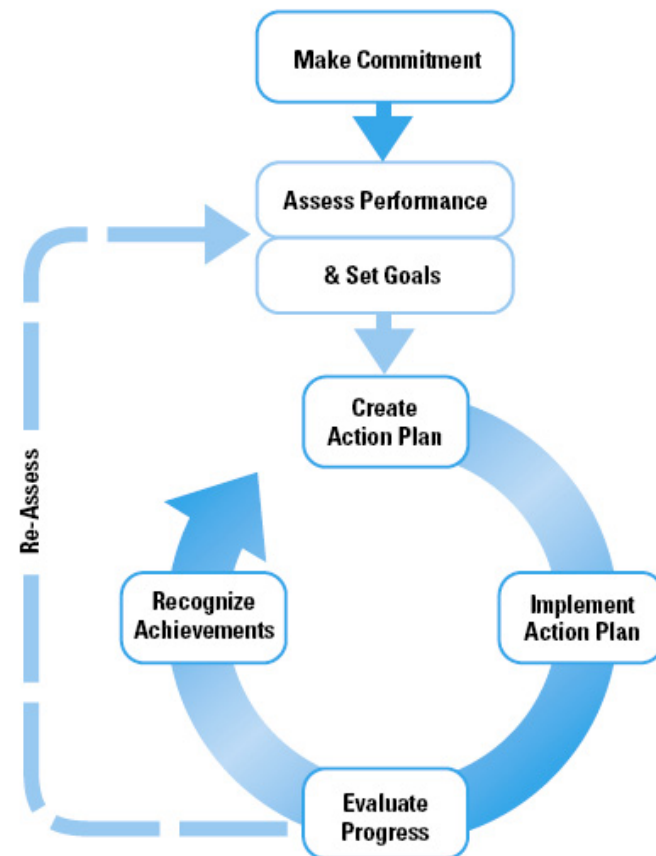
- Technical Guidance
 - Guidelines for Energy Management
 - Creating an Energy Management Team
 - Building Upgrade Manual
 - Calculator Tools
- New Building Design Guidance
- ENERGY STAR Website
 - Tools and Resource Library
 - Comprehensive Partner resources

Technical Assistance Guidelines for Energy Management



- EPA offers a proven strategy for superior energy management with tools and resources to help each step of the way.
- How can utilities use it?
 - Incorporate into customer education offerings
 - Assist customers in the planning process -set goals, targets, timelines, prioritize capital improvements
 - Serves as a platform to take customers from a rating to implementation to potential recognition
 - Develop action plans for implementation

ENERGY STAR® GUIDELINES FOR ENERGY MANAGEMENT





Program Implementation

Program Implementation

Program design assistance



- Customized support is available to Partners for incorporating ENERGY STAR into program planning and design
 - Utilities can use ENERGY STAR to learn about industry best practices for:
 - Whole building performance
 - Retro-commissioning
 - Schools
 - New construction
- and more

Program Implementation

Portfolio Manager



- Portfolio Manager is free online software housing EPA *Energy Performance Rating System*
 - Provides a standardized, comparable measurement of building energy use
 - Normalizes building energy consumption for important factors to provide 1-100 rating of whole building *energy performance*
- How can utilities use it?
 - **Informational:** Benchmarking capability enables customer to measure and track their comparative energy performance
 - **Targeting of energy efficiency resources:** Benchmarking identifies customers with significant energy efficiency program opportunities. Program resources can be packaged for customers with high savings potential
 - **Integrated component of energy efficiency:** Benchmarking becomes an integral component of a more comprehensive energy efficiency program that focuses on whole-building performance

Program Implementation

Target Finder



- Target Finder helps building designers set aggressive energy efficiency targets and rates a design's estimated energy use.
- Use Target Finder to achieve “Designed to Earn the ENERGY STAR”
- How can utilities use it?
 - Incorporate into new construction programs
 - Provide incentives for buildings that are Designed to Earn the ENERGY STAR
 - Provide design assistance incentives to architects
 - Promote and educate Challenge participants



Program Implementation

ENERGY STAR Qualified Products



- Products in more than 50 categories are eligible for the ENERGY STAR
- General categories include appliances, heating and cooling, office equipment, lighting, and commercial food service
- How can utilities use it?
 - Prescriptive incentives for products
 - Education to promote products and best practices
 - Program models that incorporate consumer outreach, cooperative marketing and coordinated promotions

Did you know...

- ENERGY STAR Products are 10-25% more efficient than required by the federal standard while providing top performance and innovative features
- New products planned for 2008 are Commercial Ovens and Griddles, Servers/Data Storage, Large Scale Routers

Program Implementation

ENERGY STAR CFS Equipment



Platform to target one of most energy-intensive commercial space types with suite of qualifying equipment

- 6 products are already covered
- developing new specs for ovens and griddles



New!



New!



Program Implementation

ENERGY STAR CFS



- EPA helps coordination
 - helps manufacturers understand utility programs
 - helps utilities reach end-users and distribution channels that are often unaware of rebates
- How can utilities use it?
 - Education & Training
 - Customizable dealer/distributor sales training presentation
 - Online/in-person training by Food Service Technology Center
 - Technical Support
 - Savings calculators
 - Strategic support for addressing market barriers
 - Prescriptive incentives for qualifying products

Program Implementation

Service and Product Providers

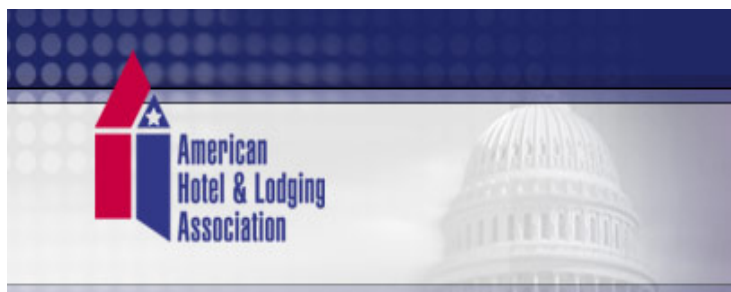
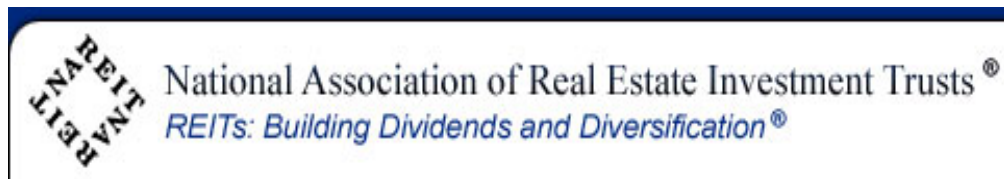


- Leverage Service and Product Providers in delivering efficiency programs
 - Deliver value added to program and customers - tap into help from experts
 - Use Directory of SPPs providing benchmarking and supporting improved building performance
- With the help of an SPP, customers can:
 - Assess the energy performance of their buildings
 - Set energy performance goals
 - Create and implement an action plan
 - Evaluate progress
- With the help of an SPP, Utilities can:
 - Deliver energy efficiency programs more efficiently to customers
 - Leverage existing SPP relationships and gain access to new program participants
 - Provide credible resources to implement customer projects

Program Implementation Industry Partners



- Support from Key Industries



Program Implementation

Industry Partners



Associations Stepping up to the Challenge - Portland Office Energy Showdown:

- Contest kicked off during BOMA BEEP trainings in early 2007
- Designed to leverage the competitive nature of the real estate industry
- Participants benchmarked energy performance with 1 year of historical data
- Winners received cash prizes and free engineering certification for buildings that earned the ENERGY STAR
- Contest built awareness and interest in benchmarking, whole building energy performance, and programs offered by the Northwest Energy Efficiency Alliance



Source: NEEA, www.nwalliance.org

Program Implementation Industry Partners



EPA and AIA Challenge the Nation's Architects



Submit projects by 15 March 2008

ENERGY STAR Web

energystar.gov/commercialbuildingdesign



Recognition

Recognition Opportunities



ENERGY STAR



Partner of the Year



Recognition Opportunities



- Reward and recognition for superior performance and ongoing improvement:
 - Buildings that earn the ENERGY STAR label
 - Companies that achieve ENERGY STAR Leaders designation
 - Customers that meet the ENERGY STAR Challenge goal
- Utilities can leverage ENERGY STAR recognition opportunities to:
 - Motivate customers toward better energy management
 - Motivate greater participation in efficiency programs

Recognition

Earning the ENERGY STAR



- Commercial and industrial facilities that achieve a score of 75 or higher on the 1-100 rating scale are eligible for the ENERGY STAR
 - Other criteria must also be met
- Utilities can:
 - use the ENERGY STAR to integrate recognition into program design
 - motivate program participants
 - choose program participants for events, press releases, and news articles



Recognition

ENERGY STAR Leaders



- Superior energy management is a leading indicator of overall organizational management
- ENERGY STAR Leaders will recognize partners that demonstrate superior energy management through organization-wide continuous improvement
 - 10, 20, and 30 percent portfolio-wide improvement
 - Portfolio-wide rating of 75 or higher
- Utilities can:
 - Leverage Leaders to help customers set organization wide goals to reduce consumption by at least 10%
 - Leverage Leaders to motivate greater program participation

Recognition Challenge Participants



- Participants in ENERGY STAR Challenge are developing additional forms of recognition
- BOMA: regional competitions and “7 Point Challenge”
- Utilities can:
 - Partner with industry associations, local governments, and energy service companies on Challenge promotions and leverage additional opportunities for customer recognition

Partner of the Year



ENERGY STAR Annual Awards Ceremony

Organizations and utilities are recognized for outstanding performance in reducing energy consumption



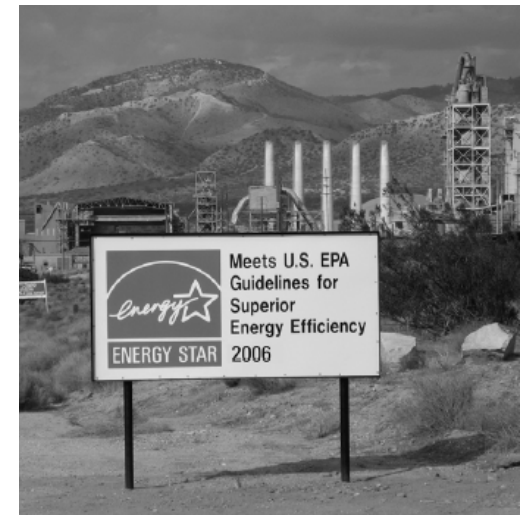


Additional Resources for Industry

ENERGY STAR for Industry



- Grown to include 10 industrial sectors
- Focus meetings a continuing success
 - Peer exchange
 - Sector-specific barriers and opportunities
- ENERGY STAR label available in four sectors
 - auto assembly,
 - cement, and
 - wet corn milling plants
 - petroleum refining
- Will add two new industries each year
 - fiberglass and cereal production in 2007
- Global Business Network releases “Energy Strategy for the Road Ahead” to prepare business executives for energy future:
 - First priority: Master the energy management fundamentals



Assisting Industry with Excellence in Energy Management



FOCUS	YEARS ACTIVE	SCOPE	PEER EXCHANGE OPPORTUNITY	INDUSTRY ENERGY GUIDE	ENERGY PERFORMANCE INDICATOR
Cement Manufacturing	3	50 percent of U.S.-based clinker [1]* production capacity	•	Complete	Final
Corn Refining	4	95 percent of U.S.-based refining capacity	•	Complete	Final
Food Processing	1 new	80 percent of U.S. processed fruit, vegetable, and grain sales	•	In process	In process
Glass Manufacturing	1	50 percent of U.S. flat, container, and fiberglass sales	•	In process	In process
Motor Vehicle Manufacturing	5	75 percent of the industry with U.S.-based production.	•	Complete	Final, updating
Petrochemical Manufacturing	new	83 percent of U.S. ethylene production capacity	•	In process	Exploring options
Petroleum Industry	2	64 percent of U.S.-based refining capacity	•	Complete	Private system recognized by EPA
Pharmaceuticals	2	Over 50 percent of the global and U.S. manufacturing capacity	•	Complete	In process
Pulp & Paper	new	70 percent of U.S.-based companies' global sales	•	In process	Exploring options
Water and Wastewater	1	40 percent of the total U.S. population represented	•	In process	In process



Program Implementation

Energy Performance Indices



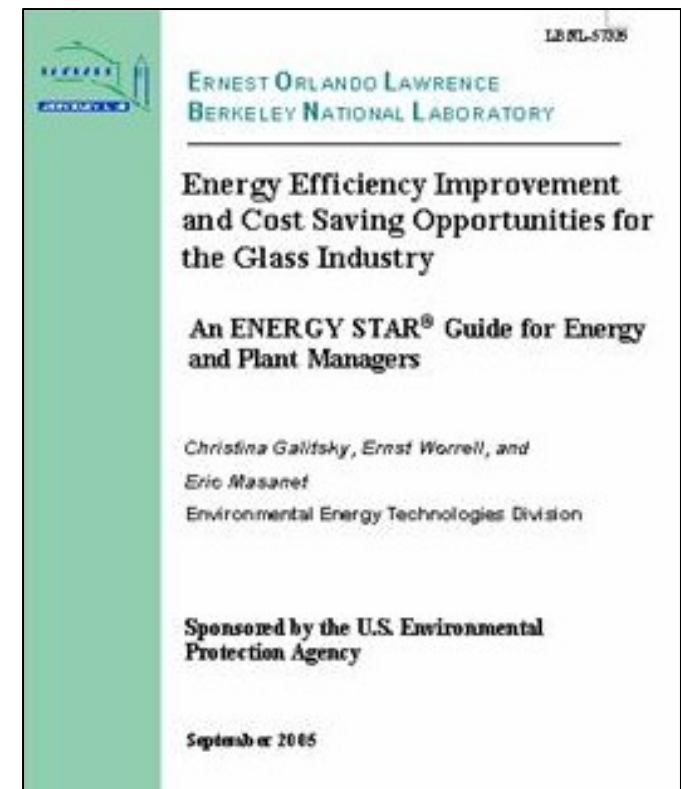
- Enable a higher level of energy management
- Provide a ranking/percentile score of a plant's energy performance in the industry, relative to best observed performance within the specific industry
 - Enable benchmarking of plant energy performance to the national industry
 - Empower corporations to set goals for improvement and monitor progress
- How can utilities use it?
 - **Informational:** Benchmarking capability enables customer to measure and track their comparative energy performance
 - **Targeting of energy efficiency resources:** Benchmarking identifies customers with significant energy efficiency program opportunities
 - **Integrated component of energy efficiency:** Benchmarking becomes an integral component of a more comprehensive energy efficiency program that focuses on whole-building performance

Technical Assistance Energy Guides



An assessment of proven, available energy efficiency technologies & practices in the U.S. and abroad for an industry

- Energy Guides:
 - identify existing & promising emerging technologies
 - provide brief overview of technology or practice
 - quantify potential energy and cost savings
- How can utilities use it?
 - Incorporate into education offerings for customers and trade allies
 - Promote best practices to specific industries
 - Promote corporate-wide energy management
 - Work with industries and individual manufacturers to improve strategic energy management at the CORPORATE level



Technical Assistance Guidance and Other Resources



- Energy Management Resources
 - Plant assessment and auditing
 - Industrial Energy Management information Center
 - Software and Calculator Tools
- ENERGY STAR Website
 - Tools and resource library

For More Information



Get involved now!

Join ENERGY STAR: <http://www.energystar.gov/join>

- Look for the Energy Efficiency Program Sponsor information (http://www.energystar.gov/index.cfm?c=reprs.pt_reps)

ENERGY STAR Web Site: www.energystar.gov



Questions?

